

**REMARKS**

PRIOR ELECTION OF SPECIES/ WITHDRAWN CLAIMS

Applicant previously elected species 2A compound MgF<sub>2</sub> as the composition of the temporary protective coating for Category A, species 1B continuous structure as the structure of the layer for Category B, and species 2C dry wiping as the method of removing the layer for Category C.

It is noted that claims 3, 6, 10, 12-13, 18 and 20 are withdrawn from consideration as being drawn to a non-elected species.

REJECTIONS UNDER 35 USC 103

Claims 1-2, 4-5, 7-9, 11, 14-17, 19, 21, and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Souel 6,281,468 in view of Medwick 2002/0176988 and now also MacNutt 2,536,075.

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souel in view of Medwick and in further view of Kimock 5,190,807.

Souel

Souel discloses a method for marking the face of an ophthalmic lens where a low surface energy hydrophobic lens overlies a higher surface energy coating on the lens substrate and a mask of having a configuration complementary to a required mark is disposed between the face of the lens to be marked and the energizing source which may be in the form of a corona

discharge so that the energizing source selectively eliminates the outermost low surface energy layer to reveal the underlying coating or the substrate.

The Examiner acknowledges that Souel does not teach a temporary protection layer having a surface energy higher than the outermost layer and a thickness less than 5 nm to enable the discharge to act on the outermost layer through the temporary layer.

The Examiner contends that Medwick teaches a removable coating for glass substrate having functional coatings to protect the substrate from the mechanical and/or chemical damage. Further, it is asserted that since Medwick teaches that the removable coating is preferably no more than 2 micrometers, but that the exact thickness thereof is selected for a particular application based on the degree of protection desired (noting page 5-6, paragraph [0044]).

The Examiner concludes it would have been obvious to modify the thickness of the protective coating of Medwick "during routine experimentation" to determine an optimal coating thickness for whatever processing step the glass substrate is to be subjected to.

As an aside, Medwick also teaches a carbon protective coating which has much smaller thickness than those referred to be the rejection, preferably 300A but which cannot be applied directly to a substrate because they draw oxygen atoms out of an

underlying functional coating and therefore requires an additional blocking layer preferably a silica layer of 25A to 100A and preferably 50A. Such a carbon protective layer is not removable by aqueous washing and is preferably removed by combustion in a tempering oven. However, a carbon protective coating does not have the claimed adhesion enhancing properties (quite the contrary) and therefore the skilled person would for that reason have turned away from such a teaching. Likewise, there is no teaching that such a carbon protective layer would be suitable for enabling an energizing source to act on the outermost functional layer of a lens.

What Does Medwick Teach One of Skill in the Ophthalmic Lens Art?

First, a review of the principles of law relating to obviousness is appropriate.

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

However, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then

the burden shifts to the Appellants to overcome the prima facie case with argument and/or evidence. (*See Id.*)

In this application, the Examiner has not satisfied this burden. The rejections should be withdrawn and the claims allowed.

I. The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). See also *KSR*, 550 U.S. at 407 ("While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.")

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *Id.* at 415-16, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248." *KSR*, 550 U.S. at 415, (citing *Graham*, 383 U.S. at 12), and reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416.

The Court also stated "[i]f a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* at 417. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* The Court noted that "[t]o facilitate review, this analysis should be made explicit." *Id.* at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

However, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.*

II. Nonetheless, hindsight may not provide a path to reject claims. The Federal Circuit in July, 1998 emphasized that "[m]ost, if not all, inventions are combinations and mostly of old elements." *In re Rouffett*, 47 USPQ 2d 1453, 1457 citing to *Richdel, Inc. v. Sunspool Corp.*, 219 USPQ 8, 12 (Fed. Cir. 1983). The Federal Circuit continued by noting that "rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a

blue print for piecing together elements in the prior art to defeat the patentability of the claimed invention."

III. In rejecting claims under 35 USC §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Furthermore, the Examiner must provide an articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

As to hindsight, the Federal Circuit requires that in order to prevent the use of hindsight, the Official Action must "show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." (*In re Rouffett* at 1458).

"One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988). In an obviousness rejection, it is impermissible "to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965).

"The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." *In re Dow Chemical Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988).

Although KSR gives the Examiner guidance in articulating a rational basis for the legal conclusion of obviousness, KSR does not allow hindsight as a basis of rejecting claims.

The articulated reasoning used to support the legal conclusion of obviousness must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal Inc. v. F-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 825 (1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1017 (1986); *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art

may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992).

IV. It is pointed out that the teachings of Medwick cannot be applied to the teachings of Souel without recourse to hindsight. Further, such a combination would not teach or suggest the claimed invention. Moreover, the person skilled in the art cannot with "routine experimentation" be expected to vary thicknesses by more than 2 orders magnitude. "Experimenting" over a range of 2 orders of magnitude is anything but routine.

A) First and foremost, the Examiner acknowledges that neither Medwick nor Souel makes any teaching concerning providing an adhesion enhancing film for enhancing the adhesion between a lens and a retaining shoe for use when trimming the lens (Official Action page 2, Response to Arguments).

B) While Souel is directed to the field of the invention and discloses a method with drawbacks that the present invention overcomes, Medwick is concerned with the entirely different technology namely that of large glass substrates having dimensions generally greater than 4 feet x 6 feet which are shipped to fabricators to be cut into smaller pieces and incorporated into production articles such as architectural windows, automotive transparencies, insulated glass units, mirrors and the like.



These large dimensional substrates are typically purchased and shipped in bulk and may be bundled together and shipped on a wooden pallet in a conventional manner. When shipping such substrates with functional coatings or substrates of different sizes, a high spot or corner of one substrate may contact the surface, e.g., the functionally coated surface, of the adjacent substrate during handling processing shipping for storage and might damage the functional coating or scratch the adjacent substrate surface.

The invention/teaching of Medwick is directed to a removable protective coating deposited over the substrate surface where protection is desired, such as protection from mechanical, chemical or handling damage. According to an aspect of the Medwick teachings, the protective coating has a thickness of less than 50 microns.

More specifically, the protective coating can have a physical thickness of up to 1000 micrometers and preferably up to 250 micrometers and more preferably up to 25 micrometers even more preferably up to 10 micrometers and still even more preferably up to about 2 micrometers and "most preferably" between about 1 micrometer and 2 micrometers on the substrate surface.

Thus, the contention that Medwick is preferably no more than 2 micrometers is a selective reading of that document in that there is no basis for a skilled person to contemplate

thicknesses than the lowest thickness recited, namely 1 micrometer.

In this regard, it should be borne in mind that such a thickness is considered necessary by Medwick to ensure that these large dimensional substrates will not be damaged during shipping, handling and storage. Surely there is no suggestion or conceivable motivation for the person skilled in the art to consider thicknesses more than 2 orders of magnitude smaller (less than about 5 nm) than the smallest thickness contemplated by Medwick.

Given the protection necessitated in the context of Medwick, one having ordinary skilled in the art could not have discovered that with a thickness of less than 5 nm (or 0.005 mm); that is, 1/500 of the smallest thickness (1 mm or 1,000 nm) disclosed in Medwick a satisfactory result could be obtained.

C) Moreover, there is no suggestion in either Souel or Medwick of providing an adhesion enhancing layer on the outermost surface of an ophthalmic lens having a thickness of no greater than 5 nm in order that to ensure a proper degree of adhesion during trimming while at the same time enable the energizing source to eliminate selectively the outermost layer on the substrate to reveal the substrate or underlying high energy coating.

The contention that the resulting protective coating from the combination of teachings of Souel and Medwick enable the

discharge to act on the outermost layer through the temporary coating to be both less than 5 nm and capable of allowing the energizing source to act on the outermost layer is based on pure hindsight and fails to take into account that the removable coating enhances adhesion between the lens and a retaining shoe nowhere found in either reference asserted.

D) As regards the contention that the claimed thickness 5 nm is an optimization obtained through routine experimentation, this contention is clearly at odds with the discussion of the optimization of ranges at MPEP § 2144.05. In this respect, it is submitted that the claimed upper limit of 5 nm is critical in that it provides enhanced adhesion to perform trimming with a retaining shoe and at the same time allows the energizing source to act on the outermost surface of the lens and that it is more than 2 orders of magnitude smaller than the smallest thickness indicated in the asserted prior art document Medwick et al.

V. Applicant appreciates the Response to Arguments section beginning on page 2 of the Official Action.

The Examiner acknowledges that neither Soule nor Medwick teach the temporary protection layer also enhances adhesion.

The Examiner wants to twist the MacNutt teachings to argue that it would be obvious to apply a temporary protection

layer having a surface energy higher than that of the outermost layer and comprised of magnesium fluoride.

This twist just does not make common sense.

First, as Medwick does not disclose a protective layer less than about 5 nm let alone a 5 nm layer to enable reenergizing source to action on the outmost layer through the temporary adhesion enhancing layer.

Further, neither Souel nor Mediwick teaches or suggests the temporary adhesion layer.

In fact, the skilled person faced with the Souel/Mediwick teachings would see no reason to adopt a temporary adhesion layer.

Thus, the next issue is what does MacNutt add.

MacNutt is of no moment since MacNutt also does not teach a temporary adhesion layer.

The Examiner all but admits there is no teaching as to a temporary adhesion layer. See on Official Action page 2, "Since the temporary protection layer of Souel in view of Medwick in further view of MacNutt comprises substantially the same properties as the layer claimed by applicant, it would be inherent that the temporary protection layer of layer of Souel in view of Medwick in further view of MacNutt would also enhance adhesion between the lens and a lens retaining shoe during trimming."

In this passage the Examiner admits that MacNutt does not teach a temporary adhesion layer and relies instead on the disclosed material inherently providing a temporary adhesion layer.

This analysis missing the point as to why one of skill would use the material.

One of skill chooses materials based on what the prior art teachings the materials to be useful for.

MacNutt teaches a permanent adhesion layer.

MacNutt addresses the problem of applying magnesium fluoride films to optical glass elements to reduce the reflection of "Fresnel" rays. While such coatings were supposed to be (circa 1945) optically effective, highly durable and strongly resistant to deterioration by physical or chemical means, many such optical element were rejected because of the improperly applied films. Salvaging these optical elements was highly important due to the large labor and financial expenditures involved in their manufacture. The fact that an  $\text{MgF}_2$  coating when faulty can be removed so that the underlying optical element can be used by again applying the same  $\text{MgF}_2$  coating does not make the faulty initial coating any less permanent than the permanent coating which it ultimately replaces.

Also, while MacNutt discloses the removal of an  $\text{MgF}_2$  coating, MacNutt fails to disclose, let alone suggest, using what is taught to be a functional coating (reduction of reflection of

"Fresnel" rays) as an adhesion enhancing coating, let alone reducing the thickness of such a coating to 5 nm so that it is possible to energize an underlying outmost permanent layer of the ophthalmic lens to selectively eliminate the outermost layer and reveal the underlying substrate.

As noted above, the Examiner concludes it would have been obvious to modify the thickness of the protective coating of Medwick "during routine experimentation" to determine an optimal coating thickness for whatever processing step the glass substrate is to be subjected to.

But the Examiner has not articulated a "processing steps" that the prior art would teach that would further be optimized for the recited thickness of less than about 5 nm.

What would the person of ordinary skill be optimizing for? Why would such optimization result in the recited thickness of less than about 5 nm?

Indeed, that one of skill would optimize the materials/layers taught in the prior art to be less than about 5 nm is entirely without factual support.

It is only the present application that teaches less than about 5 nm to be appropriate for a temporary adhesion enhancing layer having a surface energy higher than that of the outermost layer to enable the energizing source to act on the outermost layer through the temporary adhesion enhancing layer.

In sum, none of the reasons/effects of the recited temporary adhesion enhancing layer are taught or suggested by the applied prior art.

It therefore does not follow that the one skilled in the art could have relied on teachings of Medwick to reduce the thickness of a temporary coating essentially for large pieces of plate glass in Soule to less than about 5 nm which teaches for the most part thicknesses several orders of magnitude greater for purposes other than adhesion enhancement, or would have employed an adhesive enhancing coating because MacNutt teaches removing a faulty MgF<sub>2</sub> coating provided for reducing reflection of "Fresnel" rays.

Claim 1 is therefore non-obvious.

Claims dependent directly or indirectly from claim 1 are therefore patentable over the prior art for the reasons developed above in connection with claim 1.

Claim 25 is directed to a method substantially the same method as claim 1 and in addition recites selectively eliminating the outermost layer through the temporary protection layer by action of the energizing source, and removing the adhesion enhancing layer from the ophthalmic lens after the temporary adhesion enhancing layer has been selectively eliminated from the lens to produce the desired mark and after the ophthalmic lens has been trimmed to the desired contour. It is believed to be

patentable for the same reasons as claim 1 and further by reason of the additional features recited.

Reconsideration and allowance of all the claims are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Roland E. Long, Jr./  
Roland E. Long, Jr., Reg. No. 41,949  
209 Madison Street  
Suite 500  
Alexandria, VA 22314  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

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